DOCUMENT RESUME

ED 262 602 FL 015 269

AUTHOR Heath, Robert W.
TITLE Teaching Information Sequence in Scientific Writing to Primary ESL Pupils in Singapore.
PUB DATE 26 Apr 85
NOTE 17p.; Paper presented at a regional seminar of the SEAMEO Regional Language Centre (20th, Singapore, April 22-26, 1985).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141) -- Computer Programs (101)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cohesion (Written Composition); *Connected Discourse; Elementary Education; *English (Second Language); *Expository Writing; Foreign Countries; *Logical Thinking; Teaching Methods; Writing Instruction

ABSTRACT

While teaching mechanical aspects of writing in English as a second language (ESL) to ten- and eleven-year-olds has been found to be relatively simple, the most difficult thing to teach, and the first to break down when guidance is removed, is logical information sequencing. Without guidance, most children will produce random sentences, but when provided with appropriate techniques and some assistance, they can plan the sequence of information to be written. Most teachers of ESL are trained in creative writing, not in expository writing or written discourse analysis; consequently, they are underprepared for teaching this kind of information presentation. Three methods for teaching information organization have had some success: (1) brainstorming followed by reorganization of ideas; (2) a study of reading passages leading to parallel writing; and (3) constructing matrices for discourse organization. Preparing students in these ways for writing tasks can be enjoyable and can prevent frustrating revision of unsatisfactory writing. Instructional plans and materials should include more information-based functional writing and fewer narrative topics, more reading for information analysis, more parallel writing activities, and more information transfer activities, such as matrices, as the basis of writing activities. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED262602

PARALLEL SESSION

Friday 26 April 1985
1400 hours

SEAMEO REGIONAL LANGUAGE CENTRE
TWENTIETH REGIONAL SEMINAR

TEACHING INFORMATION SEQUENCE IN SCIENTIFIC WRITING TO PRIMARY ESL PUPILS IN SINGAPORE

BEST COPY AVAILABLE

Paper by
Mr Robert W Heath
Lecturer
Department of English Studies
Institute of Education
SINGAPORE

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ The document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
R. W. Heath
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Singapore

22 - 26 April 1985

FL 015 269

Note: The views expressed by the author, the selection of facts represented and the opinions stated with regard to the facts are the responsibility of the author and do not necessarily represent the views of RELC.

TEACHING INFORMATION SEQUENCE IN SCIENTIFIC WRITING TO PRIMARY ESL PUPILS IN SINGAPORE

by

Robert Heath

1.0 Why teach information sequence to young learners?

When I tell teachers that I am interested in teaching information sequence to children aged about 10 or 11 learning English as a second language the first question they generally ask me is not HOW you do it but WHY. My concern here is with the teaching of non-narrative writing, in particular on science-type topics. The first answer is that teaching children to organise information in an orderly way seems to me a very profitable and useful bit of before-the-event teaching. Most of what passes for composition teaching in the primary school, I am afraid, is an after-the-event attempt to cope with badly-organised writing. Children do have difficulty organising information. Teaching them beforehand to avoid random information sequences is one of the hardest things to do and, over quite a long period of time, one of the most resistant to sustained efforts on the part of the teacher. But it is so important that time and energy spent on it is worthwhile. In research on the teaching of non-narrative writing to 10 years old in Singapore, reported on in last year's RELC seminar (Heath 1984) I found that the mechanical aspects were relatively easy to deal with: spelling, handwriting, following a margin, setting out a paragraph, punctuation, sentence grammar. Some aspects at a higher level than the sentence were similarly not too hard: local cohesion (linking sentence 1 to sentence 2), sentence combining, simple global cohesion (linking paragraphs and the title). The hardest thing to get through to young learners, and the one which broke down when control/guidance was taken away, was orderly information sequence. So the first reason for teaching logical information sequence is that there is a clear need and it is quite difficult, even for clever children. Without instruction even the brightest will continue to churn out jerky badly-organised texts.

The need can best be demonstrated at this stage by examining a text.

Two Southeast Asian Fruits

There are two popular fruits in Singapore, that is the rambutans and durians. It is also popular in other countries in Asia.

Rambutans and durians are usually popular in July because rambutans and durians bore fruits in July. Have you ever eats durian?

Durains are nice to eat. Its skin are thorny and rough. It also has a thick skin.

We can only know when it is ripe by smelling it. Rambutans are sweet and tasty. Its flesh is white and its skin are red. It is hard to climb a rambutan tree because it is slippery.

BEST COPY AVAILABLE

This was produced by a 10 year old boy who had been given the title, pictures of the two fruits and no further help. He wrote for about thirty minutes. Now, what is really wrong with this text? I believe that most teachers, while feeling rather uneasy about it, would not immediately say "random information sequence". Yet, despite a few minor errors, this is the main thing wrong. Most teachers would focus on those surface errors and underline bore instead of bear; the grammar error in Have you ever eats durian?; the concord error in its skin are red; and so on. Perhaps some would write "This is not well-organised" or "This jumps all over the place" or "Too many short paragraphs". These comments are getting close to the truth, but are they helpful? Will they tell the child exactly what is wrong so that she can avoid the negative comment next time? How does the child improve? The answers revolve round information sequence: the teacher must recognise when it is random and teach the children to organise before they write. In short, focussing on information sequence rather than surface errors is both diagnostic and remedial. This is not to say that we should ignore the surface errors of spelling, grammar and punctuation just referred to, though a lot of the energy spent here is "teaching" after-the-event with little carry-over. My assertion is that if we confine ourselves to those features then children will continue to write badly. We must look beyond them. I have never heard it said in so many words but the implication of surface-error marking is that if you look after the little things the big things in writing will look after themselves. In my experience they don't. The fundamental thrust of writing instruction based on the insights of written discourse analysis is that you must go on to the bigger things like global cohesion and information sequence even if spelling and sentence grammar is not perfect (which it may never be) or you will never get there. It would be too "strong" to say that if you go for the bigger things the little things will look after themselves; but I would put forward a "weak" version of that claim.

A second reason for teaching information sequence revolves round the advice we give to our learners about planning. Teachers of composition are frequently at their most pious, unrealistic and high-minded when exhorting pupils to plan their writing. We tell them to do it: do we really teach them how? Most of our advice is, as John Swales has said of ESP Report writing guides, "at a level of generality that makes it hectoring rather than helpful for the non-native speaker" (Swales 1981 : 5) Primary ESL learners cannot really handle the vocabulary of planning, abstract words like Introduction, Body, Conclusion or even the deceptively simple Beginning, Middle and End. I suspect that that many older learners cannot make much of them either. But primary pupils can handle, as I will show in detail later, information presented in matrices : planning them, filling in the cells and reading along the rows in the process of writing. This is teaching before-the-event at its most helpful for ESL learners.

A third answer to WHY is that teaching information sequence is not done at the moment in primary classes for reasons that give some concern to those interested in improving the teaching of writing. Most teachers of primary ESP classes have a literature/creative writing background that influences their ideas on what writing is all about very strongly. For most of them writing is not about information at all but about feelings, responses, emotions, creative expression. These beliefs restrict teachers in what they regard as appropriate topics for writing and in what kind of help children need before they write. Thus A Memorable Dream is a good writing topic but The Life Cycle of The Frog is not.

BEST COPY AVAILABLE

I disagree. I go along with Peter Wingard when he says that "free creative writing is rarely appropriate in teaching ESL" (Abbott and Wingard 1981 : 168) These words apply to nearly every child learning English in Southeast Asia and suggest that teachers would do well to de-emphasise the personal, creative and largely narrative writing that looms so large in school composition syllabuses. Widdowson gives a further objection: creative writing can lead to an avoidance of the central problem of interaction with the reader because it encourages communion with self rather than with others (1983 : 47) In teaching the young writers how to handle information in non-narrative topics, however, we can help them to be aware of their readers, to organise their information in a way that is "reader-friendly", to signal the relationships of various parts of their written discourse. (Hoey 1983 :3)

Arising out of teachers' literature/creative writing bias is an over-concern with narrative writing, a further reason why information sequencing is not taught. A glance at a typical syllabus in a Southeast Asian primary school will confirm this: A Visit To The Dentist, Lost In The City, A House On Fire, An Accident, A Picnic, My School Sports, How I Spent Last Sunday, Showing Your Malaysian Cousin Round Singapore. As non-narrative topics are almost never given, the question of how to help children organise the information in them just does not arise. The trouble with the above topics is that children only need to use time sequence to hold them together. As far as information is concerned most narratives are an "anything goes" situation. Here is a sample from an upper primary ESL learner :

> What I Did Last Sunday
>
> I got out of bed. It was 7 a.m.. I had my breakfast. There was a plate of cereal and a drink. I like orange juice. My Sister she likes Milo. She has two spoonfuls of sugar in it. Later we ran outside. I like to play with kites. I'm making a blue kite at home with a long tail. The tail is made of ..... (and so on).

I'm not saying that this is good narrative writing, just that it is typical of what is produced in response to being given one of the topics above. One cannot say that it is "wrong". It is random and irritating but when you are operating in time sequence anything goes as far as information is concerned: so it is not wrong. With non-narrative writing, on the other hand, there are schema, culturally popular ways of presenting information such as Hoey's Problem-Solution-Evaluation pattern. (1979) These can be taught systematically and the writing evaluated against some standard.

A further reason is that most teachers have not received training, even elementary, in written discourse analysis. They can all tell you the plot of Macbeth but few can analyse a simple text for cohesion/coherence. This situation is being remedied, certainly at the National University of Singapore and probably elsewhere in the region, but it will take time before the results flow into the teaching of writing.

BEST COPY AVAILABLE

Finally, most primary English teachers are rather suspicious of functional writing, of science, of what Wingard calls "sub-technological" writing on nature, transport, industrial processes, sport, music, travel (1981 : 1959)

Is it really English? A British adviser on English teaching, Myra Barrs, voiced this unease in her review of Donald Graves Writing : Teachers and Children at Work when she wrote "Graves' model of the writing process is, in the end, inadequate. It seems the writer's main job as one of organising information. It is essentially a journalistic model with overtones of information technology" (Barrs 1983: 23) For Barrs and a large number of English teachers the influence of their own literature/creative writing school days is powerful and this has defined the subject: English means writing about dreams and clouds and personal experiences, not science and technology.

So, for all these reasons, most primary teachers do not give help in organising information before the children write. It is a pity. Having made a case for doing this I now intend to examine HOW it can be done.

2.0 How to teach information sequence to young learners

I said earlier that it was difficult to teach information sequence to young learners. By this I mean that it is difficult to make the effects permanent, to get a long-term carryover into their written work. This is true of much writing teaching. But the actual techniques are quite simple. The key stage is the decision to do it, not the techniques themselves. I propose to discuss three: there are a number of other possibilities.

1. "Brainstorming" followed by re-ordering.

2. The study of reading passages leading on to parallel writing.

3. Constructing matrices.

All these have been tried with a primary 5 class in Singapore over a period of time and met with some success. Some recently-produced material has incorporated parts of these techniques, in particular the first one.

2.1 "Brainstorming" followed by reorganisation

To train young ESL learners in the important skill of describing, elementary science writing, the teacher could start like this: "Today you are going to write about a fruit that you've never seen or tasted before. It's called a pok-pok. Here's a picture of it. Now ask me some questions about it." The questions will come in any order: Is it juicy? What colour is it inside? Where does it grow? Can you eat the skin? What does it taste like? and so on. The teacher puts them on the chalkboard in a vertical list. When completed the teacher tells the class: "You are going to write about this fruit. What order do you think you should answer the questions in?" After discussion the teacher and class arrive at an acceptable order. Now this seems

BEST COPY AVAILABLE

a paralysingly obvious, straightforward thing to do but curiously I have never seen it done in several years of observing English writing lessons. What you are doing is introducing young children to rhetoric, to the idea that there are accepted ways of doing things (certainly in Western culture). Kaplan calls this "reinventing the rhetorical tradition". One obvious way with a fruit is to go from the outside and work in: country grown in; seasons available; on trees?; in bunches or singly?; skin; skin colour when unripe; skin colour when ripe; flesh texture; flesh colour; taste; smell.

When all the scientific facts have been dealt with the "unscientific" questions that young children raise can be added: What does it cost? Where can you buy it? Who buys it in your family? and so on. I deal later with the question of whether to include these in science writing or not.

Of course the teacher of young ESL children will not use words like "rhetorical models" or "culturally popular discourse patterns" even though that is exactly what she is introducing to the children.

The writing task is to write about the pok-pok or any other fruits following the information sequence of the re-numbered questions on the board.

2.2 Study of a reading passage and the writing of a parallel text

Parallel text writing is now fairly familiar to ESL teachers of tertiary students. It is a revolution yet to come in the primary schools. I, for one, cannot wait. The combination of intensive reading for a purpose, analysis, and following a discourse model is very valuable for young learners. Until materials become widely available primary teachers can use or adapt material written for ESP. Here is a text written with a target audience of ESP students at Ngee Ann Polytechnic by John Honeyfield (1981 : 112).

Two Southeast Asian Fruits

The durian and the rambutan are both favourite fruits in Southeast Asia, but they are different in many ways. The durian is a large, spiny fruit with a thick skin. When ripe, the skin is brown in colour, and the flesh is creamy yellow. The flesh is soft and slightly greasy in consistency; a European writer once described the taste as 'a mixture of cheese, onions and sherry.' A durian has a characteristic smell which is rather strong.

The rambutan is a small, hairy fruit which also has a thick skin. When it is ripe, the skin is dark red; the flesh inside is firm and whitish, but may be watery. A ripe rambutan is deliciously sweet. It does not have a strong smell.

BEST COPY AVAILABLE

Perhaps the bit about sherry can be eliminated for young children but I have at time used the passage with no changes at all.

The children silently read it then go through it with the teacher. This is no ordinary comprehension lesson, however, with the series of aimless questions that has been so well described by Paul Nation in The Curse of the Comprehension Question (Nation 1979 : 85) The children's attention is directed to the pieces of information which they can underline in pencil, noting the order. Numbers can be written above the facts: large = 1; spiny skin = 2; brown when ripe = 3; and so on. Then the children go through the second paragraph and are either shown or (ideally) discover that the information is in the same order. Here, then, painlessly they are introduced to the idea of "reader-based prose" (Flower and Hayes 1981), of the writer considering his reader by putting the information about the two objects in the same order. "It's so much easier to follow," one 10 year old commented to me when she had finished.

The writing task, described in more detail in my paper last year, (Heath 1984) is to cover several different fruits in the same way with similar information sequence.

2.3 Constructing and using a matrix

In developing lessons teaching children to set out and use information in a matrix I am drawing heavily on the "Birmingham school" of written discourse analysis, especially the work of Michael Hoey, Tim Johns and Florence Davies. Davies and Johns have written about TAVI, text as a vehicle of information, contrasting it with what they call TALO, text as linguistic object. (1983) Their work on topic types and matrix analyses of typical science texts provides a very useful starting point for the teacher of writing. Translating all this to the ESL primary classroom I have found that children enjoy and profit from setting out information in a matrix. To pursue my describing fruit topic, constructing an information matrix involves listing the names of the fruit in the rows and the attributes in the columns.

BEST COPY AVAILABLE

	where found	skin	skin colour when ripe	flesh	taste	smell
durian	Malaysia Thailand– trees	spiny thick	brown	yellow soft	like no other fruit	strong
rambutan	Malaysia Thailand Singapore– trees	hairy thick	dark red	white firm	sweet	not strong
banana						
any other fruit etc.						

This information can be elicited from the children in the same way that the reorganising was done in the "brainstorming" method. After doing one or two fruits orally you leave them to fill in the remaining cells of the matrix. They do this from their own knowledge, asking neighbours, perhaps in groups or pairs, extracting information from reading passages, or by consulting reference books. At this stage the information is very compressed, one or two words only in a cell. The writing task is to follow the matrix along the rows from left to right, converting the condensed information into sentences and the whole rows into paragraphs. With clever children the matrix can be taken away before they begin or after they have written on one fruit only. The process of writing, in which researchers have taken much interest lately, becomes one of referring back to the first paragraph which established the sequence. An interesting insight into process is shown in text E on your handout where the girl has inserted "when it *is* ripe". I asked her why and when she made the insertion. She said that when she wrote "The skin is yellow when it is ripe" in the second paragraph she realised that this information was not in the first paragraph so she went back and put it in. This is an example of that non-linear back-and-forth composing process that researchers like Flower and Hayes (1981) have described so carefully.

2.3 Inserting new information

In the review of Donald Graves by Myra Barrs, referred to earlier, she noted with obvious disapproval, that Graves "talks of children learning the mechanics of data insertion "(Barrs 1983 : 23) I note the same thing with approval: one of the most valuable things children can learn is where and how to put new information in their writing. The sections in Keith Johnson's Communicate in Writing that deal with

BEST COPY AVAILABLE

this, his rubric "Decide where you would put it and what words you would use" (1981 : 40) seems to me most helpful. In my own research with 10 year olds one of the most interesting things to emerge from the writing was how they handled the problem of putting in information that was not in the matrix. The way they did it was a very interesting and frankly heartening confirmation that they had grasped the idea of orderly information sequence. Briefly, what emerged was this: they added something about a fruit that was not provided in the matrix in the same place every time. Here are some examples. One girl decided to put something about shape which was not in the matrix. She added it between size and skin in each case

- (mango) "has the shape of a heart"
- (banana) "has the shape of a curved moon"

Another included seeds, not given in the matrix, between skin and colour.

- (mango) "has only one seed"
- (banana) "the seeds can be eaten too"
- (pineapple) "the seeds are on the outside."

And a boy who wanted to mention cost did so as the last item in each paragraph.

The mention of cost leads me to answer this question: is it really "science" when pupils volunteer information on cost, or whether they like it, or who brings the fruit home? Most science teachers will reject it. I accept it and my reasoning is this: if your primary focus is information sequence, as mine is here, and not science or creative writing, then you accept any facts as long as they are in a logical place. I even accept wrong facts: elephants 50 metres long, pineapples growing on trees, bananas with seeds inside, and so on. Put another way, the science teacher and the English (who may be the same person in the primary school) should move towards each other: the science teacher should be less rigid about what she accepts as science and scientific writing; the English teacher should include more science-type topics in writing lessons and fewer blood-curdling narrative sagas; and both of them should show concern for the logical presentation of information, helping children with the mechanics of data insertion.

3.0 Implications

The conclusions can be briefly stated.

1. Writing on science-type non-narrative topics is a profitable and enjoyable use of class time.

2. By focussing on information sequence the teacher is able to do valuable before-the-event teaching. The teaching is preventive and encouraging rather than the usual disaster-relief exercise at the end of an unsatisfactory writing activity.

BEST COPY AVAILABLE

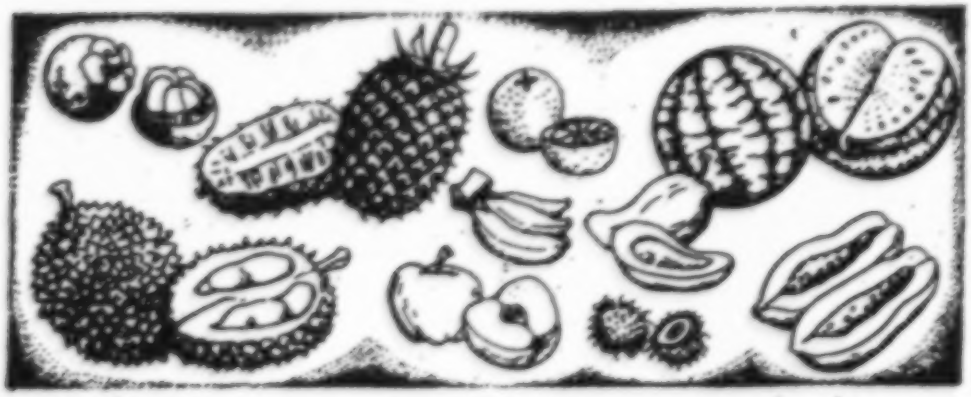
3. Composition syllabus designers for the primary school should include more information-type functional writing and fewer narrative topics.

4. Textbooks writers and materials developers should include more reading passages with information to analyse, more parallel writing activities, and more information transfer activities such as matrices as the basis of writing activities. One encouraging sign that materials designers are incorporating more of these ideas is this composition exercise from a Singapore textbook, MESPE, produced by the Curriculum Development Institute of Singapore (1983).

Exercise 2 Date _____

A Write a composition about your favourite fruit.
These questions will help you.

My Favourite Fruit



1. What is your favourite fruit? (apple, orange, papaya, rambutan, durian, banana, mangosteen, watermelon, pineapple, mango)
2. What is its size? (small, big)
3. Is it big or small? (green, red, orange)
4. What shape is it? (round, oval, long)
5. Describe the skin of the fruit. (hairy, thorns on its skin, thick peel, thin skin)
6. Describe its taste. (sweet, juicy, delicious, soft)
7. How many seeds are inside it? (one seed, a lot of seeds)
8. Do you eat the skin of the fruit?
9. Is the fruit expensive?
10. Do you eat it every day?

BEST COPY AVAILABLE

The designers of the material have clearly thought about it and provided helpful questions. Before releasing the text to the class the teacher could

a) try to get the questions from the pupils

b) see if they can arrange them in a logical order

One criticism: having dealt with the skin in question 5 they return to it in question 8, giving an impression of randomness. The only way to construct activities like this (and teachers making up their own should note) is to write the target text out, making sure it is fully satisfactory as a text; and then to go back and make up the questions. Every written discourse analyst will let out a cheer at that advice.

4.0 The computer program WHAT NEXT?

Finally I would like to demonstrate a computer program that was written in 1984 to help children anticipate the new piece of information in a short science-type text. I say "was written" rather than "I wrote" because the real work of translating this idea into BASIC computer language for the Sinclair Spectrum PC was done by Tim Johns at University of Birmingham. Many of you will know the book Computers in Language Learning that he wrote with John Higgins (1984) The idea for the program, however, was mine. It starts with a short science-type text from a primary school textbook. The one I have used here is Two Slow Creatures. This typed in as a DATA statement. The program pulls out the title, prints it at the top of the screen and offers the learner two possible sentences to start with. The choice is between the first sentence (correct) and one randomly selected from the rest of the text. If the learner selects the correct one it is printed under the title but inset in paragraph form. The learner is then offered the second sentence (correct, and containing the next logical piece of information in the text) and another randomly selected sentence. You keep going until the whole text in two paragraphs is built up on the screen. As an exercise for the learner this is an attempt to replicate the choices in information sequencing that a learner makes in the process of writing. Numerous writers, including my colleague Phyllis Chew, (1984 : 75) have pointed out the usefulness of the computer as a tool for the teaching of writing as a process. Obviously this program, though designed for young learners working with short science texts, could be extended to other groups of learners at secondary or tertiary level.

References

Barrs, Myra. 1983. Born Again Teachers: A review of Donald Graves, Writing: Teachers and Children at work. Times Educational Supplement 24.6.83

Chew, Phyllis G. L. 1985. A Look into the Future: the Word-Processor and the Writing Class. Teaching and Learning Vol. 5 no. 2. Singapore: Institute of Education.

Flower, Linda and Hayes, John R. 1981. A Cognitive Process Theory of Writing. College Composition and Communication, 32 (4)

BEST COPY AVAILABLE

Heath, Robert W. 1984 (a). Teaching Cohesive Non-narrative Writing Using Discourse Models to 10 Year Old ESL Children in Singapore. (Unpublished): M.A. thesis, University of Birmingham.

_____. 1984 (b). Teaching 10 Year Old ESL Pupils in Singapore to Communicate in Writing. (Mimeographed paper for the SEAMEO RELC Regional Seminar, 1984)

Higgins, John and Johns, Tim. 1984. Computers in Language Learning. London: Collins ELT.

Hoey, Michael. 1983. On the Surface of Discourse. London: George Allen and Unwin

_____. (Forthcoming). Undeveloped discourse: some factors affecting the adequacy of childrens written discourses. In Wilkinson, J. Children's writing in the middle years. London: George Allen and Unwin

Honeyfield, John. 1981. Discourse models in second language writing. Guidelines No. 6 Singapore: SEAMEO RELC.

Johns, Tim and Davies, Florence. 1983. Text as a vehicle for information: the classroom use of written texts in teaching reading in a foreign language. Reading in a foreign language Vol. 1 No. 1.

Nation, I.S.P. 1979. The curse of the comprehension question: some alternatives. In Guidelines No, 2. Singapore: SEAMEO RLC.

Swales, John. 1981. Aspects of article introductions. Aston ESP Research Report No. 1. Birmingham: The University of Aston in Birmingham.

Widdowson, H.G. 1983. New starts and different kinds of failure. In Freeman, A. et. al. Learning to write: first language/second language. Harlow: Longman.

Wingard, Peter. 1981. Writing. (Chapter 6). In Abbott, Gerry and Wingard, Peter. The Teaching of English as an International Language. Glasgow: Collins.

BEST COPY AVAILABLE

```
 10 REM  WHAT NEXT?  Rob Heath & Tim Johns
 20 GO SUB 1000: GO SUB 7520: REM Initialise
 30 GO SUB 3000: REM title page
 40 GO SUB 0900:  REM pres-C
 50 GO SUB 2000: REM instructions
 55 GO SUB 4000: REM Set screen
 60 GO SUB 3500: REM menu
 70 GO SUB 4500: REM Wait-a-bit
 97 REM
 98 REM Read string
 99 REM
100 RESTORE 9010
110 READ number
120 LET t$=""
130 FOR n=1 TO number
140 READ x$
150 LET t$=t$+x$
160 NEXT n
197 REM
198 REM Set up pointer array
199 REM
200 DIM p(20): LET p(1)=1
210 LET sentence=0
220 FOR n=1 TO LEN t$
230 IF t$(n)="." OR t$(n)="!" OR t$(n)="?" THEN  LET sentence=sentence+1: LET p
(sentence+1)=n
240 NEXT n
297 REM
298 REM Main Program
299 REM
300 PRINT AT 7,0;z$
305 FOR n=1 TO sentence-1: LET pos=1
310 LET choice=n: GO SUB 5000: LET l1=line
320 LET wrong=n+1+INT (RND*(sentence-n))
330 LET choice=wrong: LET pos=2: GO SUB 5000: LET l2=line
340 LET order=INT (RND*2)
350 IF order THEN  LET q$(1,1,1)="B": LET q$(2,1,1)="A": GO TO 370
360 LET q$(1,1,1)="A": LET q$(2,1,1)="B"
370 PRINT AT 15,0: PAPER 7: BRIGHT 1
380 FOR m=1 TO (l1 AND NOT order)+(l2 AND order)
390 PRINT q$(order+1,m)
400 NEXT m
410 FOR m=1 TO (l2 AND NOT order)+(l1 AND order)
420 PRINT q$(2-order,m)
430 NEXT m
439 REM
440 REM *****Get response*****
441 REM
445 PRINT #0; PAPER 7; INK 2; BRIGHT 1;AT 1,0;"   What next?   Press A or B
N  GO TO 500
470 PRINT #0; PAPER 7; INK 0; BRIGHT 1; AT 1,0;"    Sorry, you got it wrong.
"
480 GO SUB 7000: REM face
485 GO SUB 7050: REM sad
490 PAUSE 100
492 GO SUB 7050
494 GO SUB 7000: REM face
498 GO TO 445
```

BEST COPY AVAILABLE

```
 500 PRINT #0;AT 1,0; BRIGHT 1; PAPER 7; INK 2;"  Well done, you got it right!
"
 510 GO SUB 6000: REM wipe bott
 520 GO SUB 8000: REM print-s
 530 GO SUB 7000: REM face
 540 GO SUB 7030: REM smile
 545 PAUSE 100
 570 GO SUB 7030
 575 GO SUB 7000: REM face
 576 IF n<sentence-1 THEN  GO SUB 900: REM press c
 580 NEXT n
 600 PRINT #0;AT 1,0;"   Well done, you've finished   "
610 GO TO 610
620 STOP
899 REM Press C
900 PRINT #0;AT 1,0; INK 1; PAPER 7; BRIGHT 1;"      Press C to continue


 997 REM
 998 REM Initialise Session
 999 REM
1000 DIM q$(2,6,32)
1010 LET width=32
1020 POKE 23658,8
1030 LET printext=8000
1040 LET width=32
1050 LET z$="                                "
1500 RETURN
1999 REM Instructions
2000 CLS : PRINT AT 1,9;"INSTRUCTIONS";AT 3,0;"1. You are going to build up a";
T 4,3;"reading passage sentence by";AT 5,3;"sentence."
2010 PRINT AT 7,0;"2. You will be given the title";AT 8,3;"and two sentences, A
and B,";AT 9,3;"to choose from."
2020 PRINT AT 11,0;"3. Choose the best one to start";AT 12,3;"the reading passa
e and press"'"   A or B."
2030 PRINT AT 15,0;"4. If you are correct the";AT 16,3;"sentence will be printe
";AT 17,3;"under the title."
2040 PRINT AT 19,0;"4. Choose the next sentence";AT 20,3;"from A or B, and so on
."
2050 GO SUB 900
2060 GO SUB 2500
2100 RETURN
2497 REM
2498 REM wipe
2499 REM
2500 FOR n=0 TO 21: PRINT AT n,0;z$
2510 NEXT n
2520 RETURN
2997 REM
2998 REM Title
2999 REM
3000 BORDER 3: PAPER 7: INK 0: BRIGHT 1: CLS
3010 PRINT AT 5,0;"           WHAT NEXT?           "
3020 RETURN
3499 REM Menu
3510 RESTORE 9000
3520 READ t$
3530 PRINT  PAPER 2; INK 7;AT 0,16-INT ((LEN t$)/2);t$
3600 RETURN
3999 REM Setscreen
4000 BORDER 1: PAPER 6: CLS
```

BEST COPY AVAILABLE

```
4010 FOR n=16 TO 21: PRINT  PAPER 7;AT n,0;z$: NEXT n
4200 RETURN
4499 REM Wait-a-bit
4500 PRINT AT 7,3; INK 1; FLASH 1;"Wait a few seconds, please"
4520 RETURN
4997 REM
4998 REM Initialise Text
4999 REM
5000 LET s$=t$(p(choice)+1 TO p(choice+1)): LET c$=s$
5010 IF s$(1)<>" " AND s$(1)<>"^" THEN  GO TO 5028
5020 LET s$=s$(2 TO ): GO TO 5010
5025  REM wordwrap
5026 REM
5028 LET s$="  "+s$
5030 LET length=LEN s$
5040 LET start=1
5050 LET line=1
5060 LET cut=start+width
5070 IF cut>length THEN  LET q$(pos,line)=s$(start TO length): GO TO 5500
5080 IF s$(cut)=" " OR s$(cut-1)="-" THEN  GO TO 5100
5090 LET cut=cut-1: GO TO 5080
5100 LET q$(pos,line)=s$(start  TO cut-1): LET line=line+1
5110 LET start=cut
5120 IF s$(start)<>" " THEN  GO TO 5060
5130 LET start=start+1
5140 GO TO 5120
5500 RETURN
5999 REM wipebottom
6000 FOR m=16 TO 21
6010 PRINT AT m,0;z$
6020 NEXT m
6030 RETURN
6999 REM face
7000 OVER 1
7010 CIRCLE 125,125,40: PRINT  PAPER 6;AT 5,12;"O";AT 5,18;"O";AT 6,15;"U"
7015 OVER 0
7020 RETURN
7029 REM happy
7030 OVER 1: PLOT 100,114: DRAW 50,0,PI: OVER 0
7035 OVER 0
7040 RETURN
7049 REM sad
7050 OVER 1: PLOT 100,102: DRAW 50,0,-1: OVER 0
7060 RETURN
7499 REM
7500 INPUT Initialise printext
7501 REM
7520 LET offset=0
7530 LET ln=1
7550 RETURN
7998 REM wordwrap text
7999 REM
8000 PAPER 6: LET d$=t$(p(n)+1 TO p(n+1))
8010 IF d$(1)="^" THEN  LET ln=ln+1: LET offset=0: LET d$=d$(2 TO )
8020 LET length=LEN d$
8030 LET start=1
8040 LET cut=start+width-offset
8050 IF cut>length THEN  PRINT AT ln,offset;d$(start TO length): LET offset=len
th-start+1: GO TO 8170
```

BEST COPY AVAILABLE

```
8080 IF d$(cut)=" " OR d$(cut-1)="-" THEN  GO TO 8110
8090 LET cut=cut-1
8100 IF cut<>start THEN  GO TO 8080
8105 LET ln=ln+1: LET offset=0: GO TO 8040
8110 PRINT AT ln,offset;d$(start TO cut-1): LET ln=ln+1: LET offset=0
8130 LET start=cut
8140 IF d$(start)<>" " THEN  GO TO 8040
8150 LET start=start+1
8160 IF start<>length THEN  GO TO 8140
8170 PAPER 7: RETURN
8900 DATA 1
9000 DATA "TWO SLOW CREATURES"
9010 DATA 3,"  Have you heard people say 'as slow as a snail'? Scientists have f
ound that the fastest snail can crawl about 5 metres an hour. The slowest ones t
ake much longer, up to an hour to crawl 60 centimetres!"
9020 DATA "^  The giant tortoise is another slow mover. It cannot move faster th
an 4 metres a minute, not even when it is looking for food. When it has a long w
ay to go, it moves even slower."
9030 DATA "The third slow creature is the South American sloth."
```

BEST COPY AVAILABLE